

Appl. No. : 09/681,948
Filed : June 29, 2001

REMARKS

Reconsideration and allowance of the above-referenced application are respectfully requested.

Claims 1-8 and 14-17 stand rejected under 35 U.S.C. 101 as allegedly being directed to non-statutory subject matter. This contention, however, it is respectfully traversed. The rejection states that the claims are "directed to somebody analyzing the picture...". With all due respect, the claims do not recite this. The claims recite operations, for example claim 1 defines analyzing an image to recognize actual objects... claim 1 also recites replacing recognized parts within the image by an indication. Whether this could be done by somebody is not dispositive of whether the claims are statutory under 35 USC §101.

In Diamond v. Chakrabarty, 447 US 303 (1980), the Supreme Court held that 35 USC §101 covered "anything under the sun that was made by man". Diamond at 308. The only exclusions are laws of nature, physical phenomena, and abstract ideas. Id. The analysis carried out herein is not a law of nature. The analysis carried out herein requires analyzing and replacing, and therefore interacts with the real world, and as such is not an abstract idea. A physical phenomena would require that it was something that actually occurred as a phenomenon, which certainly is not the case for these claims.

Accordingly, the contention that claim 1 is not statutory subject matter is plainly antithetical to Supreme Court case law on the subject matter. Reversal of this non-statutory subject matter rejection is therefore respectfully requested.

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Claim 14 requires analyzing an image against a database and storing a list of image portions. This claim is even further clearly statutory under section 101. Nothing here is a law of nature, physical phenomena or abstract idea. Moreover, claim 14 require storing a list of image portions, and the act of storing a list certainly requires interaction with the real world, and therefore is also statutory.

Therefore, and for these reasons, claims 1-8 and 14-17 clearly do recite statutory subject matter.

Claims 1-6 and 8-13 stand rejected under 35 U.S.C. 102(e) as allegedly being unpatentable over Matsugu. Claim 1 has been amended to change the term "parts" to -actual objects-. In effect, this amendment incorporates the subject matter of claim 5 into claim 1. As amended, this contention is respectfully traversed.

Specifically, nowhere does Matsugu teach anything about recognizing actual objects within the image. Matsugu teaches a system for extracting feature elements from an image. The feature elements are effectively lines and curves within the image. A number of different feature elements can be brought together to form a mask, see generally column 7 lines 42-50. Note that the feature elements are not actually objects, but are rather items such as "L-type intersections and curve elements" see column 7 lines 44-45. In essence Matsugu takes an image and divides it into its representative parts, lines and curves, which it calls feature elements. The amendment of claim 1 to recite "actual objects" obviates this rejection. In rejecting claim 6, the Patent Office discusses obtaining information about subparts of the actual object in Figure 3. However, nowhere is there any teaching or suggestion of recognizing the actual objects, as required by amended claim 1.

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Claim 9 has been amended to recite that the database stores a plurality of image parts representing likely objects that may exist in the image, and that the image processing device recognizes these objects in the image that correspond to image parts in the database. The recognized objects are replaced with indications representing the recognized parts.

As described above, Matsugu recognizes the things he calls "features" which are lines and curves. There is no teaching or suggestion of recognizing actual objects, as claimed. Therefore, claim 9 should be allowable along with claims 10-13 which depend therefrom.

The dependent claims should be allowable for similar reasons. Claim 2 specifies providing individual part information indicative of how the actual objects differ from the unit objects. The rejection draws attention to column 5 lines 31-36 which explains using least mean squares to find out which feature element is closest to the reference feature element. There is no teaching or suggestion of providing differing information about this part. Instead of providing the differing information -- Matsugu simply uses least means squares to find the closest match.

Claim 3 specifies size and orientation relative to the unit parts. The rejection refers to Matsugu's column 5 lines 10-19 which explain the scaling parameter. However, Matsugu teaches nothing about the claimed orientation of the recognized parts.

Column 5 lines 9-16 does explain that there are different feature elements for the different intersection pattern and for different orientations, see column 5 line 19. Since Matsugu teaches a separate local feature element for a different orientation, it stands to

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reason that Matsugu teaches away from the subject matter of claim 3 which describes orientation difference information.

The corresponding dependent claims 11 through 13 should be allowable for similar reasons.

Claims 7 and 14-17 stand rejected over Matsugu in view of Ferguson. Referring to claim 7 first, the limitations of Matsugu have been extensively discussed above. Claim 7 further requires subparts of the actual object that include text. Ferguson teaches a computer-based document management system. Text can be obtained, as part of the scanning system. The document collection is organized into a hierarchy. The rejection refers to Figure 2A, which shows that a document represented by file 200 may have a number of different fields including a text field. This teaches nothing about recognizing the objects, as required by the claim, and as described above.

Moreover, with all due respect, one having ordinary skill in the art would not make a hypothetical combination of Ferguson in view of Matsugu. Matsugu teaches a local feature based system for converting an image into features. Ferguson teaches a document management system. There appears to be no similarity between the two. Only with the benefit of hindsight could the combination even be made.

Claim 14 requires looking for portions of the image were for not present in the database, and storing the list of the portions which are not found in the database to later be used to update the database. The rejection refers to Ferguson's column 6 lines 18 through 30 to show this feature. This cited section states that the indexing database is continuously updated. With all due respect, this is an entirely different thing. Claim 14 requires that an image is analyzed, and portions of the image which are present are

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replaced by the contents of the database. The database is updated, so that more contents are present, for better image substitution.

Column 6 lines 18-30 describe that new documents are continually indexed. As explained, the index and retrieval engine "creates a new entry in the indexing database for the document". Indexing of a document is entirely different than updating image parts in a database. The claim recites looking for items in the image, and when they are not recognized, adding them to the database. Ferguson simply teaches creating an indexing database from the documents, basically a document indexer. If Matsugu and Ferguson could be operatively combined by a person having ordinary skill in the art, therefore, what they would obtain is a Matsugu type feature compression system along with Ferguson's teaching of forming an indexing for the items. There is no teaching or suggestion of storing the list of image portions which are not found in the database, as claimed.

It is believed that all of the pending claims have been addressed in this paper. However, failure to address a specific rejection, issue or comment, does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above are not intended to be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper, and the amendment of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment.

Therefore, and in view of the above amendments and remarks, all of the claims

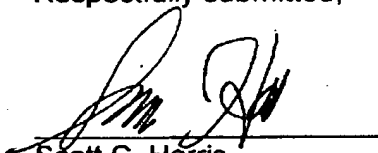
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should be in condition for allowance. A formal notice to that effect is respectfully solicited.

Please charge any fees due in connection with this response to Deposit Account No. 50-1387.

Respectfully submitted,

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